

should default to the value 1.0, "width" ("iwidth" in FORTRAN), which controls the width to which the display is truncated (up to 160), and "atom," which is added to the range of the data to avoid a zero division if the range is less than the smallest nonzero number the computer can process. The default for "width" should depend on the number of characters that the terminal can print on a single line, while that for "atom" depends on the precision of the computer.

The procedure for the box plot involves use of a subprogram, "fill," which does the necessary computations to determine where the characters should be placed in the display. As mentioned in the text, the parameter "length" controls the horizontal dimension of the display.

APL FUNCTIONS

All of the APL functions listed in this book use a single right-hand argument, with the exception of the auxiliary function "FILL." In contrast to the computing syntax used in the text, APL functions operate from right to left. For example, to store the output of the function "FFFFF" applied to the array "X" in the file "Z," one would use the command

```
Z < FFFFF X
```

```
VSTEMLEAF[[]]V
V Z+STEMLEAF X;C;R;S;SI;I;J;F;A;W;L
[1] C+10*1-[10*R+ATOM+(X[pX]-(X+X[AX←,X]))[1]]÷SCALE
[2] SI+(1+3*+/(R×C)> 25 50 )+/(pX)> 25 100
[3] X←[0.5+X×C×10**+/SI= 2 3 6
[4] F←+/(SI=19)/ 0.5 2 1 1 0.5 2 2 1 0.5
[5] A←20p '01234567890123456789' ,Z+' '
[6] I←F×[X[1]]×10×F
[7] S← ' - ' [1+J+X[1]≥0]
[8] L←1+((W+(X≤(10×I))+J×-1+10×F)/X)-10×[|I
[9] Z←Z,WIDTHpS,A[1+( 10 10 )↑|L|],'|',A[L],WIDTHp' '
[10] I←I+F×1-(I=0)×X[1]<0
[11] +7×10<pX+(pW)+X
[12] Z←((L(pZ)÷WIDTH),WIDTH)pZ
```